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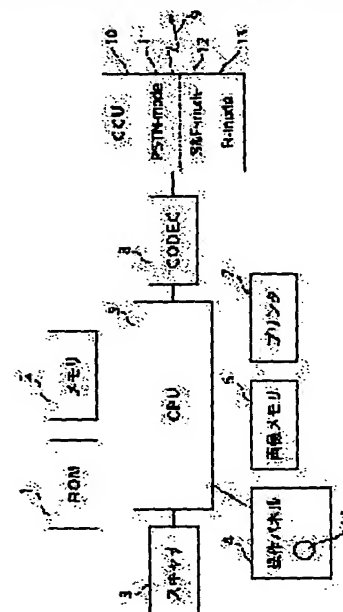
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(54) FACSIMILE TERMINAL, FACSIMILE COMMUNICATION CONTROL METHOD AND STORAGE MEDIUM

(57)Abstract:

PROBLEM TO BE SOLVED: To provide a facsimile terminal that provides selection of various communication modes according to a priority instruction, provides a conventional G3 facsimile communication and two kinds of Internet facsimile communications, attains the communication with priority of the T.38 and finally attains the T.30 communication that is sure communication, and can select the conventional G3 facsimile communication in compliance with the T.30 when the T.30 communication is selected with priority or the T.37 communication is in error.

SOLUTION: The facsimile terminal is provided with an operation panel 4 with a processing circuit key 14 that can make a priority instruction for communication with a desired channel type and a desired facsimile communication protocol among connection channel types and facsimile communication protocols and with a CPU 5 that selects the connection channel type and the facsimile communication protocol on the basis of the priority instruction by the priority key 14.



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CLAIMS

[Claim(s)]

[Claim 1] Facsimile apparatus which has the picture reading function characterized by providing the following to read a picture in a manuscript, the image formation function which forms a picture in a record medium, and the communication facility which transmit and receive a picture through communication media. The setting means in which the priority directions which communicate by giving priority to a desired thing among two or more connection circuit classes and two or more facsimile communication procedures are possible. Control means which choose the connection circuit class based on priority directions and facsimile communication procedure by this setting means.

[Claim 2] Facsimile apparatus according to claim 1 characterized by for the aforementioned connection circuit class being a connection circuit class containing a public line network and the Internet at least, and being a facsimile communication procedure in which the aforementioned facsimile communication procedure contains the G3 facsimile communication procedure based on T.30 protocol, the Internet facsimile communication procedure of a store-and-forward method based on T.37 protocol, and the Internet facsimile communication procedure of a real-time method based on T.38 protocol at least.

[Claim 3] The aforementioned control means are the facsimile apparatus according to claim 1 or 2 characterized by to change a facsimile communication procedure in order of the Internet facsimile communication procedure of the aforementioned real-time method based on the T.38 aforementioned protocol, the Internet facsimile communication procedure of the aforementioned store-and-forward method based on the T.37 aforementioned protocol, and the aforementioned G3 facsimile communication procedure based on the T.30 aforementioned protocol, and to make it transmit when the priority directions of the Internet facsimile communication procedure of the aforementioned real-time method based on the T.38 aforementioned protocol are made by the aforementioned setting means.

[Claim 4] The aforementioned control means are facsimile apparatus given in the claim 1 or any of 3 they are. [which is characterized by to make a facsimile communication procedure change and transmit to the aforementioned G3 facsimile communication procedure based on the T.30 aforementioned protocol when the priority directions of the aforementioned G3 facsimile communication procedure based on the T.30 aforementioned protocol are made by the aforementioned setting means, or when image data is not able to be sent to an accepting station by the Internet facsimile communication procedure of the aforementioned store-and-forward method based on the T.37 aforementioned protocol]

[Claim 5] Facsimile apparatus given in the claim 1 or any of 4 they are. [which is characterized by the ability to apply to the compound machine which united the aforementioned facsimile apparatus with image formation equipment or the picture reader, and the compound machine which united the aforementioned facsimile apparatus with image formation equipment and the picture reader]

[Claim 6] The facsimile communications control method which is characterized by providing the following and which is applied to the facsimile apparatus which has the picture reading function to read a picture in a manuscript, the image formation function which forms a picture in a record medium, and the communication facility which transmit and receive a picture through communication media. The setting process in which the priority directions which communicate by giving priority to a desired thing among two or more connection circuit classes and two or more facsimile communication procedures are possible. The control process which chooses the connection circuit class based on priority directions and facsimile communication procedure by this setting process.

[Claim 7] The facsimile communications control method according to claim 6 characterized by for the aforementioned connection circuit class being a connection circuit class containing a public line network and the Internet at least, and being a facsimile communication procedure in which the aforementioned facsimile communication procedure contains the G3 facsimile communication procedure based on T.30 protocol, the Internet facsimile communication procedure of a store-and-forward method based on T.37 protocol, and the Internet facsimile communication procedure of a real-time

method based on T.38 protocol at least.

[Claim 8] When the priority directions of the Internet facsimile communication procedure of the aforementioned real-time method based on the T.38 aforementioned protocol are made according to the aforementioned setting process at the aforementioned control process, The Internet facsimile communication procedure of the aforementioned real-time method based on the T.38 aforementioned protocol for a facsimile communication procedure, The Internet facsimile communication procedure of the aforementioned store-and-forward method based on the T.37 aforementioned protocol, The facsimile communications control method according to claim 6 or 7 characterized by changing in order of the aforementioned G3 facsimile communication procedure based on the T.30 aforementioned protocol, and making it transmit.

[Claim 9] The facsimile communications control method given in whether the claim 6 or any of 8 they are. [which is characterized by to make a facsimile communication procedure change and transmit to the aforementioned G3 facsimile communication procedure based on the T.30 aforementioned protocol at the aforementioned control process when the priority directions of the aforementioned G3 facsimile communication procedure based on the T.30 aforementioned protocol are made according to the aforementioned setting process, or when image data is not able to be sent to an accepting station by the Internet facsimile communication procedure of the aforementioned store-and-forward method based on the T.37 aforementioned protocol]

[Claim 10] The facsimile communications control method given in the claim 6 or any of 9 they are. [which is characterized by the ability to apply to the compound machine which united the aforementioned facsimile apparatus with image formation equipment or the picture reader, and the compound machine which united the aforementioned facsimile apparatus with image formation equipment and the picture reader]

[Claim 11] The storage in which read-out [computer / which memorized the program which performs the facsimile communications control method which is characterized by providing the following, and which is applied to the facsimile apparatus which has the picture reading function to read a picture in a manuscript, the image formation function which forms a picture in a record medium, and the communication facility which transmit and receive a picture through communication media] is possible. The aforementioned facsimile communications control method is a setting step in which the priority directions which communicate by giving priority to a desired thing among two or more connection circuit classes and two or more facsimile communication procedures are possible. The control step controlled to choose the connection circuit class and facsimile communication procedure based on priority directions by this setting step.

[Claim 12] The storage according to claim 11 characterized by for the aforementioned connection circuit class being a connection circuit class containing a public line network and the Internet at least, and being a facsimile communication procedure in which the aforementioned facsimile communication procedure contains the G3 facsimile communication procedure based on T.30 protocol, the Internet facsimile communication procedure of a store-and-forward method based on T.37 protocol, and the Internet facsimile communication procedure of a real-time method based on T.38 protocol at least.

[Claim 13] When the priority directions of the Internet facsimile communication procedure of the aforementioned real-time method based on the T.38 aforementioned protocol are made by the aforementioned setting step at the aforementioned control step, The Internet facsimile communication procedure of the aforementioned real-time method based on the T.38 aforementioned protocol for a facsimile communication procedure, The Internet facsimile communication procedure of the aforementioned store-and-forward method based on the T.37 aforementioned protocol, The storage according to claim 11 or 12 characterized by controlling to change in order of the aforementioned G3 facsimile communication procedure based on the T.30 aforementioned protocol, and to make it transmit.

[Claim 14] A storage given in whether the claim 11 or any of 13 they are. [which is characterized by to control by the aforementioned control step to change a facsimile communication procedure to the aforementioned G3 facsimile communication procedure based on the T.30 aforementioned protocol, and to make it transmit when the priority directions of the aforementioned G3 facsimile communication procedure based on the T.30 aforementioned protocol are made by the aforementioned setting step, or when image data is not able to be sent to an accepting station by the Internet facsimile communication procedure of the aforementioned store-and-forward method based on the T.37

[Claim 15] A storage given in the claim 11 or any of 14 they are. [which is characterized by the ability to apply to the compound machine which united the aforementioned facsimile apparatus with image formation equipment or the picture reader, and the compound machine which united the aforementioned facsimile apparatus with image formation equipment and the picture reader]

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DETAILED DESCRIPTION

[Detailed Description of the Invention]

[0001]

[The technical field to which invention belongs] this invention relates to the storage which can be read about facsimile apparatus, the facsimile communications control method, and a storage by computer which memorized the program which performs the facsimile communications control method and this facsimile communications control method which are applied to the facsimile apparatus which can operate by two or more communicate modes especially, and this facsimile apparatus.

[0002]

[Description of the Prior Art] Now, also in facsimile apparatus, not only the public line (PSTN:Public Switched Telephone Network) that is a telephone network but the facsimile apparatus of the type with which spread operates on the remarkable Internet has appeared.

[0003]

[Problem(s) to be Solved by the Invention] However, there were the following problems in the above-mentioned conventional technology. That is, since it had two or more communication line modes, the facsimile apparatus of a type which operates not only a public line that was mentioned above but on the Internet should just transmit in which mode preferentially, or is unknown and had been freely set up inside the facsimile apparatus terminal fixed. Therefore, although the pictures for transmission were a lot of pictures, there was un-arranging [which carries out long-distance transmission by PSTN, or transmits in the mode of the store and forward of the Internet while he wants to transmit to a partner certainly immediately].

[0004] this invention is made in view of the point mentioned above, and the change of the various communicate modes is offered according to priority directions. The usual G3 facsimile communication and two kinds of Internet facsimile communications are offered. T. Priority is given to 38, it can communicate and finally T.30 communication of certain communication can be performed, and T.30 priority or when T.37 is an error, it aims at offering the facsimile apparatus, the facsimile communications control method, and storage which can choose the usual G3 facsimile communicate mode of T.30.

[0005]

[Means for Solving the Problem] In order to attain the above-mentioned purpose, invention according to claim 1 The picture reading function to read a picture in a manuscript, the image formation function which forms a picture in a record medium, The setting means in which the priority directions which are the facsimile apparatus which has the communication facility which transmits and receives a picture through communication media, and communicate by giving priority to a desired thing among two or more connection circuit classes and two or more facsimile communication procedures are possible, It is characterized by having a connection circuit class based on the priority directions by this setting means, and the control means which choose a facsimile communication procedure.

[0006] In order to attain the above-mentioned purpose, invention according to claim 2 is characterized at least by being a facsimile communication procedure containing the G3 facsimile communication procedure based on [are a connection circuit class containing a public line network and the Internet, and / at least] T.30 protocol in the aforementioned facsimile communication procedure, the Internet facsimile communication procedure of a store-and-forward method based on T.37 protocol, and the Internet facsimile communication procedure of a real-time method based on T.38 protocol by the aforementioned connection circuit class.

[0007] In order to attain the above-mentioned purpose, invention according to claim 3 When, as for the aforementioned control means, the priority directions of the Internet facsimile communication procedure of the aforementioned real-time method based on the T.38 aforementioned protocol are made by the aforementioned setting means, The Internet facsimile communication procedure of the aforementioned real-time method based on the T.38 aforementioned

protocol for a facsimile communication procedure, It is characterized by changing in order of the Internet facsimile communication procedure of the aforementioned store-and-forward method based on the T.37 aforementioned protocol, and the aforementioned G3 facsimile communication procedure based on the T.30 aforementioned protocol, and making it transmit.

[0008] In order to attain the above-mentioned purpose, invention according to claim 4 is characterized by for the aforementioned control means to make a facsimile communication procedure change and transmit to the aforementioned G3 facsimile communication procedure based on the T.30 aforementioned protocol, when the priority directions of the aforementioned G3 facsimile communication procedure based on the T.30 aforementioned protocol are made by the aforementioned setting means, or when image data is not able to be sent to an accepting station by the Internet facsimile communication procedure of the aforementioned store-and-forward method based on the T.37 aforementioned protocol.

[0009] In order to attain the above-mentioned purpose, invention according to claim 5 is characterized by the ability to apply to the compound machine which united the aforementioned facsimile apparatus with image formation equipment or the picture reader, and the compound machine which united the aforementioned facsimile apparatus with image formation equipment and the picture reader.

[0010] In order to attain the above-mentioned purpose, invention according to claim 6 The picture reading function to read a picture in a manuscript, the image formation function which forms a picture in a record medium, It is the facsimile communications control method applied to the facsimile apparatus which has the communication facility which transmits and receives a picture through communication media. It is characterized by having the setting process in which the priority directions which communicate by giving priority to a desired thing among two or more connection circuit classes and two or more facsimile communication procedures are possible, and the connection circuit class based on the priority directions by this setting process and the control process which chooses a facsimile communication procedure.

[0011] In order to attain the above-mentioned purpose, invention according to claim 7 is characterized at least by being a facsimile communication procedure containing the G3 facsimile communication procedure based on [are a connection circuit class containing a public line network and the Internet, and / at least] T.30 protocol in the aforementioned facsimile communication procedure, the Internet facsimile communication procedure of a store-and-forward method based on T.37 protocol, and the Internet facsimile communication procedure of a real-time method based on T.38 protocol by the aforementioned connection circuit class.

[0012] In order to attain the above-mentioned purpose, invention according to claim 8 When the priority directions of the Internet facsimile communication procedure of the aforementioned real-time method based on the T.38 aforementioned protocol are made according to the aforementioned setting process at the aforementioned control process, The Internet facsimile communication procedure of the aforementioned real-time method based on the T.38 aforementioned protocol for a facsimile communication procedure, It is characterized by changing in order of the Internet facsimile communication procedure of the aforementioned store-and-forward method based on the T.37 aforementioned protocol, and the aforementioned G3 facsimile communication procedure based on the T.30 aforementioned protocol, and making it transmit.

[0013] In order to attain the above-mentioned purpose, it carries out that invention according to claim 9 makes a facsimile communication procedure change and transmit to the aforementioned G3 facsimile communication procedure based on the T.30 aforementioned protocol at the aforementioned control process when the priority directions of the aforementioned G3 facsimile communication procedure based on the T.30 aforementioned protocol are made according to the aforementioned setting process, or when image data is not able to be sent to an accepting station by the Internet facsimile communication procedure of the aforementioned store-and-forward method based on the T.37 aforementioned protocol as the feature.

[0014] In order to attain the above-mentioned purpose, invention according to claim 10 is characterized by the ability to apply to the compound machine which united the aforementioned facsimile apparatus with image formation equipment or the picture reader, and the compound machine which united the aforementioned facsimile apparatus with image formation equipment and the picture reader.

[0015] In order to attain the above-mentioned purpose, invention according to claim 11 The picture reading function to read a picture in a manuscript, the image formation function which forms a picture in a record medium, It is the storage in which read-out [computer / which memorized the program which performs the facsimile communications control method applied to the facsimile apparatus which has the communication facility which transmits and receives a picture through communication media] is possible. The setting step in which the priority directions which communicate by the aforementioned facsimile communications control method giving priority to a desired thing among two or more connection circuit classes and two or more facsimile communication procedures are possible, It is characterized by

having the control step controlled to choose the connection circuit class and facsimile communication procedure based on priority directions by this setting step.

[0016] In order to attain the above-mentioned purpose, invention according to claim 12 is characterized at least by being a facsimile communication procedure containing the G3 facsimile communication procedure based on [are a connection circuit class containing a public line network and the Internet, and / at least] T.30 protocol in the aforementioned facsimile communication procedure, the Internet facsimile communication procedure of a store-and-forward method based on T.37 protocol, and the Internet facsimile communication procedure of a real-time method based on T.38 protocol by the aforementioned connection circuit class.

[0017] In order to attain the above-mentioned purpose, invention according to claim 13 When the priority directions of the Internet facsimile communication procedure of the aforementioned real-time method based on the T.38 aforementioned protocol are made by the aforementioned setting step at the aforementioned control step, The Internet facsimile communication procedure of the aforementioned real-time method based on the T.38 aforementioned protocol for a facsimile communication procedure, It is characterized by controlling to change in order of the Internet facsimile communication procedure of the aforementioned store-and-forward method based on the T.37 aforementioned protocol, and the aforementioned G3 facsimile communication procedure based on the T.30 aforementioned protocol, and to make it transmit.

[0018] In order to attain the above-mentioned purpose, invention according to claim 14 carries out controlling to change a facsimile communication procedure to the aforementioned G3 facsimile communication procedure based on the T.30 aforementioned protocol, and to make it transmit as the feature at the aforementioned control step, when the priority directions of the aforementioned G3 facsimile communication procedure based on the T.30 aforementioned protocol are made by the aforementioned setting step, or when image data is not able to be sent to an accepting station by the Internet facsimile communication procedure of the aforementioned store-and-forward method based on the T.37 aforementioned protocol.

[0019] In order to attain the above-mentioned purpose, invention according to claim 15 is characterized by the ability to apply to the compound machine which united the aforementioned facsimile apparatus with image formation equipment or the picture reader, and the compound machine which united the aforementioned facsimile apparatus with image formation equipment and the picture reader.

[0020]

[Embodiments of the Invention] Hereafter, the form of operation of this invention is explained in detail based on a drawing.

[0021] [Form of operation] drawing 1 is the block diagram showing the composition of the facsimile apparatus concerning the form of operation of this invention. The facsimile apparatus concerning the form of operation of this invention ROM1, memory 2, a scanner 3, and the control panel 4 (setting means) that has the priority key 14, CPU5 (a setting means, control means), an image memory 6, and the printer unit 7, CODEC8 (Coder-Decoder), CCU which has PSTN-mode (T.30 advice of international standard advice ITU-T)11, S&F-mode (T.37 advice of international standard advice ITU-T)12, and R-mode (T.38 advice of international standard advice ITU-T)13 () [Communication] Control Unit10 is provided. Nine in drawing is a public line network.

[0022] When the above-mentioned composition is explained in full detail, ROM1 is memory only for read-out which stores the software which orders operation of this facsimile apparatus. Memory 2 is memory which accumulates various information. A scanner 3 has the function to read the transmitting picture of this facsimile apparatus. The control panel 4 is equipped with the dialing key and the priority key 14 which sets up priority directions of the various communicate modes, and uses it for facsimile operation.
 [0023] CPU5 is arithmetic and program control which controls the various units of this facsimile apparatus according to specification of the software in which it was stored by ROM1, and performs processing shown in the flow chart of below-mentioned drawing 2 and drawing 3 . An image memory 6 is memory which accumulates the transmitting picture and receiving picture of this facsimile apparatus. The printer unit 7 prints and outputs the receiving picture of this facsimile apparatus to the recording paper. CODEC8 elongates compression or a receiving picture for the transmitting picture of this facsimile apparatus.

[0024] CCU10 is a communication control unit which performs line control. In CCU10, PSTN-mode11 controls G3 facsimile communication with the public line network 9. S&F-mode12 accesses the provider who offers the Internet service through the public line network 9, and communicates in mail form (store-and-forward: -- a certain reason -- data -- on the way -- when you come out and transmission becomes impossible, keep it temporarily until it is the middle node and resending becomes possible) R-mode13 communicates by the real time mode through the public line network 9. The program which performs actual processing of PSTN-mode11, S&F-mode12, and R-mode13 is stored in ROM1.

[0025] That is, the facsimile apparatus concerning the gestalt of operation of this invention of the above-mentioned

composition is characterized by having the various following functions.

[0026] (1) While enabling a setup of the priority directions over which priority is given to a desired thing among two or more connection circuit classes (the public line network 9, Internet) and two or more facsimile communicate modes (the G3 facsimile communicate mode (T. 30 protocols), the Internet facsimile communicate mode (T. 37 protocols) of a store-and-forward method, the Internet facsimile communicate mode of a real-time method (T. 38 protocols)) by the priority key 14 of a control panel 4, it has the function which chooses automatically a setup by which priority directions were carried out.

[0027] (2) It has the function in which it can respond to the usual G3 facsimile communicate mode based on T.30 protocol, the Internet facsimile communicate mode of a store-and-forward method based on T.37 protocol, and the Internet facsimile communicate mode of a real-time method based on T.38 protocol as the facsimile communicate mode.

[0028] (3) When priority directions of T.38 are made, it has the function which changes the communicate mode in order of T.38->T.37->T.30, and is transmitted.

[0029] (4) When priority directions of T.30 are made, or when image data is not able to be sent to an accepting station by T.37, it has the function which changes the communicate mode to the usual G3 facsimile mode, and is transmitted.

[0030] Drawing 7 is explanatory drawing showing the conceptual example by which the program and the related data which perform the facsimile communications control method of this invention are supplied to equipment from a storage. The program and the related data which perform the facsimile communications control method of this invention are supplied by inserting the storages 71, such as a floppy disk and CD-ROM, in the storage drive insertion mouth 73 equipped by equipment 72. Then, it becomes possible in loading to direct RAM, without once installing a program and related data in a hard disk from a storage 71, loading to RAM from a hard disk, or installing in a hard disk to perform a program and related data.

[0031] In this case, in the facsimile apparatus concerning the gestalt of operation of this invention, when performing the program which performs the facsimile communications control method of this invention, it is supplying the program concerned and related data to facsimile apparatus in a procedure which was explained with reference to above-mentioned drawing 7, or storing the program concerned and related data in facsimile apparatus beforehand, and program execution becomes possible.

[0032] Drawing 6 is explanatory drawing showing the example of composition of the content of storage of the storage which memorized the program and the related data which perform the facsimile communications control method of this invention. A storage consists of contents of storage of the volume information 61, the directory information 62, the program execution file 63, and program related data file 64 grade. The program which performs the facsimile communications control method of this invention is program-code-ized based on the flow chart of below-mentioned drawing 2 and drawing 3, and the sequence diagram of drawing 4 and drawing 5.

[0033] Next, operation of the facsimile apparatus concerning the gestalt of operation of this invention constituted like the above is explained in detail, referring to drawing 1 - drawing 5.

[0034] First, change processing of the facsimile apparatus concerning the gestalt of operation of this invention is explained according to the flow chart of drawing 2 and drawing 3, and the sequence diagram of drawing 4. With this operation gestalt, the facsimile apparatus of a transmit terminal A and the communications-partner point is called an accepting station B for this facsimile apparatus.

[0035] At Step S200 of drawing 2 and drawing 3, CPU5 of facsimile apparatus (transmit terminal A) It judges which communicate mode is set up by the priority key 14 of a control panel 4. in the case of T.38 It progresses to Step S201 and is judged as the Internet (instancy) mode (T. 38) specification. by Step S202 an accepting station -- B -- an Internet address -- b -- and -- this -- a transmit terminal -- A -- a public line -- a network -- nine -- a course -- the Internet -- connecting -- having -- **** -- a case -- dial up -- depending -- the Internet -- an access point -- it is -- a provider -- the gateway -- (-- GW --) -- the address -- setting up.

[0036] GW at this time is called the on-lamp gateway. It connects with GW (off-lamp gateway) of the receiving side in which Internet address b is held, and this on-lamp gateway is further connected to an accepting station B from this off-lamp gateway.

[0037] When the predetermined response of T.38 from this accepting station B is checked and there is a response at Step S203, it progresses to Step S206 and Internet R-mode (real time mode) is decided, it is Step S207 and Internet real-time communication is performed. Communication will be completed if predetermined communication is cut at Step S208.

[0038] Detailed operation at this time is described by drawing 4. This drawing 4 explains the example of the signal which actually flows a path. the block diagram of the upper case of this drawing 4 shows the example of the connection of a transmit terminal A and an accepting station B mentioned above, and a G3 facsimile terminal (a

transmit terminal A, an accepting station B) connects it to ends by direct PSTN -- having -- **** -- the -- a provider's gateway (GW) is connected previously and it connects with the Internet via it

[0039] This example is the case where the transmit terminal A and the accepting station B have all communicate mode R-mode (T.38 advice of international standard advice ITU-T), S&F-mode (T.37 advice of international standard advice ITU-T), and PSTN-mode (T.30 advice of international standard advice ITU-T). The flow of the signal at this time is shown below.

[0040] When the priority mode is specified to be T.38 by the priority key 14 of a control panel 4, as a transmitting side, a transmit terminal A accesses the address of an Internet provider first, and transmits the address information of an accepting station B. It connects with a provider's off-lamp GW to which the accepting station B is connected from the Internet address of this accepting station B by GW by the side of a transmit terminal A (it is called the on-lamp GW) by the SETUP signal. The signal of the protocol H.245 which defines the terminal information which communicates with Q.931 message used between GW(s) of the call setup of T.38 in it is used for this.

[0041] If a call in is in an accepting station B from the off-lamp GW, since the accepting station B has the function of T.38, a predetermined response is performed, as for a transmit terminal A, this is connected to an accepting station B via the Internet by a CONNECT signal being taken out from the off-lamp GW by the on-lamp GW, and the communication root is established. After that, the signal of the usual G3 facsimile of a transmitting side is changed into an Internet-compatible signal with the on-lamp GW, is conversely changed into the G3 signal usual with the off-lamp GW, and is told to an accepting station B. Then, in this example, it thinks that an exchange of G3 facsimile signal as fundamentally shown in drawing 4 is performed, and is illustrating.

[0042] If transmission of image data finishes and is cut, the procedure for next releasing connection of the Internet operates, a RELCOMP signal is taken out from the on-lamp GW by the off-lamp GW, and cutting directions will come out and will be cut from the off-lamp GW by the accepting station B. T.38 terminates normally with this. Since T.38 was specified by specification of the priority key 14 of a control panel 4 and the accepting station B of the communications-partner point had T.38 at this time, especially a change procedure does not operate.

[0043] Next, operation in which a change is performed in the facsimile apparatus concerning the form of operation of this invention is explained according to the flow chart of drawing 2 and drawing 3, and the sequence diagram of drawing 5.

[0044] At Step S203 of above-mentioned drawing 2 and drawing 3, when there is no response of T.38, it progresses to Step S204, and the Internet S&F-mode operation is set up, it progresses to Step S207, and communication is started in store-and-forward mode.

[0045] In the time of the off-lamp GW to a call-in signal being transmitted to an accepting station B, as for drawing 5 being different from above-mentioned drawing 4, if drawing 5 explains, although operation of the beginning of drawing 5 is the same as the case of above-mentioned drawing 4, since an accepting station B does not have the function of T.38 at this time, there is no predetermined response, a disconnect signal RELCOMP is taken out from the off-lamp GW by the on-lamp GW, and a transmit terminal A is once cut. Next, a recurrence call is automatically performed in the T.37 mode. Since it is store-and-forward mode at this time, communication by the G3 facsimile procedure is performed between a transmit terminal A and the on-lamp GW, image data is once accumulated at the memory of the on-lamp GW, and communication is completed.

[0046] After that, connection is made on the off-lamp GW from the on-lamp GW based on the Internet address of an accepting station B, image data is transmitted to the off-lamp GW, and it is accumulated shortly at the memory of the off-lamp GW. After this, call origination is performed to an accepting station B from the off-lamp GW, and the image data which received via the on-lamp GW from the transmit terminal A in the usual G3 facsimile procedure is transmitted again. Here, finally transmission of image data is completed.

[0047] At this time, the off-lamp GW is periodically accessed from a receiving side, without carrying out call origination to an accepting station B automatically from the off-lamp GW, and there is also a method of receiving image data in the polling form which is the communicate mode of facsimile. This is based on the function/contract of a provider and a terminal.

[0048] Moreover, even when communication between a transmit terminal A and the on-lamp GW is normal in the case of the store and forward of T.37, there is no guarantee normally transmitted to the accepting station B from the off-lamp GW. Here, an error may be returned as one of the functional procedures of T.37. It is better to transmit in positive G3 facsimile mode by retransmitting a message at this time. Moreover, it is better to transmit in G3 facsimile mode from the beginning to send the amount of pictures certainly many now.

[0049] As explained above, according to the facsimile apparatus concerning the form of operation of this invention, the following operations and effects are done so.

[0050] (1) Since the connection circuit class based on the priority directions by the priority key 14 of the control panel

4 in which the priority directions which communicate by giving priority to a desired thing among two or more connection circuit classes and two or more facsimile communication procedures are possible, and the priority key 14, and CPU5 which perform control which chooses a facsimile communication procedure provide, the effect offer the change of the various communicate modes according to priority directions is.

[0051] (2) At least, since a connection circuit class is a facsimile communication procedure containing the G3 facsimile communication procedure based on [are a connection circuit class containing a public line network and the Internet, and / at least] T.30 protocol in a facsimile communication procedure, the Internet facsimile communication procedure of a store-and-forward method based on T.37 protocol, and the Internet facsimile communication procedure of a real-time method based on T.38 protocol, it is effective in the ability to offer the usual G3 facsimile communication and two kinds of Internet facsimile communications.

[0052] (3) When the priority directions of the Internet facsimile communication procedure of a real-time method based on T.38 protocol are made, in order to change a facsimile communication procedure in order of the Internet facsimile communication procedure of a real-time method based on T.38 protocol, the Internet facsimile communication procedure of a store-and-forward method based on T.37 protocol, and the G3 facsimile communication procedure based on T.30 protocol and to make it transmit, priority is given to T.38, it can communicate, and there is an effect which T.30 communication of certain communication can finally do

[0053] (4) When the priority directions of a G3 facsimile communication procedure based on T.30 protocol are made, or when image data is not able to be sent to an accepting station by the Internet facsimile communication procedure of a store-and-forward method based on T.37 protocol, in order to make a facsimile communication procedure change and transmit to the G3 facsimile communication procedure based on T.30 protocol, T.30 priority or when T.37 is an error, there is an effect which can choose the usual G3 facsimile communicate mode of T.30.

[0054] form] of operation of others [[] -- in the form of operation of this invention mentioned above, although the case of a facsimile apparatus simple substance was raised to the example, this invention is not limited to this and is applicable also to the compound machine (MFT) which united facsimile apparatus with image formation equipment (printer equipment) or the picture reader (scanner equipment), and the compound machine which united facsimile apparatus with image formation equipment and the picture reader

[0055] Moreover, in the form of operation of this invention mentioned above, although the case of a facsimile apparatus simple substance was raised to the example, this invention is not limited to this and can be applied also to the system which connected facsimile apparatus (or compound machine) and external devices, such as a computer.

[0056] In addition, even if it applies this invention to the system which consists of two or more devices, you may apply it to the equipment which consists of one device. Being attained cannot be overemphasized by supplying the storage which memorized the program code of the software which realizes the function of the operation form mentioned above to a system or equipment, and reading and performing the program code with which the computer (or CPU and MPU) of the system or equipment was stored in media, such as a storage.

[0057] In this case, the function of the operation form which the program code itself read from media, such as a storage, mentioned above will be realized, and media, such as a storage which memorized the program code, will constitute this invention. As media, such as a storage for supplying a program code, download through a floppy disk, a hard disk, an optical disk, a magneto-optic disk, CD-ROM, CD-R, a magnetic tape, nonvolatile memory card, ROM, or the network etc. can be used, for example.

[0058] Moreover, being contained when the function of the operation form which OS which is working on a computer performed a part or all of actual processing, and the function of the operation form mentioned above by performing the program code which the computer read is not only realized, but it mentioned above by the processing based on directions of the program code is realized cannot be overemphasized.

[0059] Furthermore, being contained, when the function of the operation form which CPU with which the expansion board and expansion unit are equipped performed a part or all of actual processing, and mentioned above by the processing is realized based on directions of the program code, after the program code read from media, such as a storage, is written in the memory with which the expansion unit connected to the expansion board inserted in the computer or the computer is equipped cannot be overemphasized.

[0060]

[Effect of the Invention] The priority directions which communicate by giving priority to a desired thing among two or more connection circuit classes and two or more facsimile communication procedures enable, and as having explained above, in order to perform the control which chooses automatically the connection circuit class based on priority directions, and a facsimile communication procedure, according to facsimile apparatus according to claim 1, the facsimile communications control method according to claim 6, and the storage according to claim 11, the effect offer the change of the various communicate modes according to priority directions is.

[0061] According to facsimile apparatus according to claim 2, the facsimile communications control method according to claim 7, and the storage according to claim 12, moreover, with the aforementioned connection circuit class It is a connection circuit class containing a public line network and the Internet at least. with the aforementioned facsimile communication procedure The G3 facsimile communication procedure based on T.30 protocol at least, T. The Internet facsimile communication procedure of a store-and-forward method based on 37 protocols, T. Since it is a facsimile communication procedure containing the Internet facsimile communication procedure of a real-time method based on 38 protocols, it is effective in the ability to offer the usual G3 facsimile communication and two kinds of Internet facsimile communications.

[0062] Moreover, according to facsimile apparatus according to claim 3, the facsimile communications control method according to claim 8, and the storage according to claim 13 When the priority directions of the Internet facsimile communication procedure of the aforementioned real-time method based on the T.38 aforementioned protocol are made, The Internet facsimile communication procedure of the aforementioned real-time method based on the T.38 aforementioned protocol for a facsimile communication procedure, In order to change in order of the Internet facsimile communication procedure of the aforementioned store-and-forward method based on the T.37 aforementioned protocol, and the aforementioned G3 facsimile communication procedure based on the T.30 aforementioned protocol and to make it transmit, T. Priority is given to 38, it can communicate and there is an effect which T.30 communication of certain communication can finally do.

[0063] Moreover, according to facsimile apparatus according to claim 4, the facsimile communications control method according to claim 9, and the storage according to claim 14 When the priority directions of the aforementioned G3 facsimile communication procedure based on the T.30 aforementioned protocol are made, Or when image data is not able to be sent to an accepting station by the Internet facsimile communication procedure of the aforementioned store-and-forward method based on the T.37 aforementioned protocol, In order to make a facsimile communication procedure change and transmit to the aforementioned G3 facsimile communication procedure based on the T.30 aforementioned protocol, T.30 priority or when T.37 is an error, there is an effect which can choose the usual G3 facsimile communicate mode of T.30.

[0064] Moreover, according to facsimile apparatus according to claim 5, the facsimile communications control method according to claim 10, and the storage according to claim 15, there is the same effect as the above also in the compound machine which united facsimile apparatus with image formation equipment or the picture reader, and the compound machine which united facsimile apparatus with image formation equipment and the picture reader.

[Translation done.]

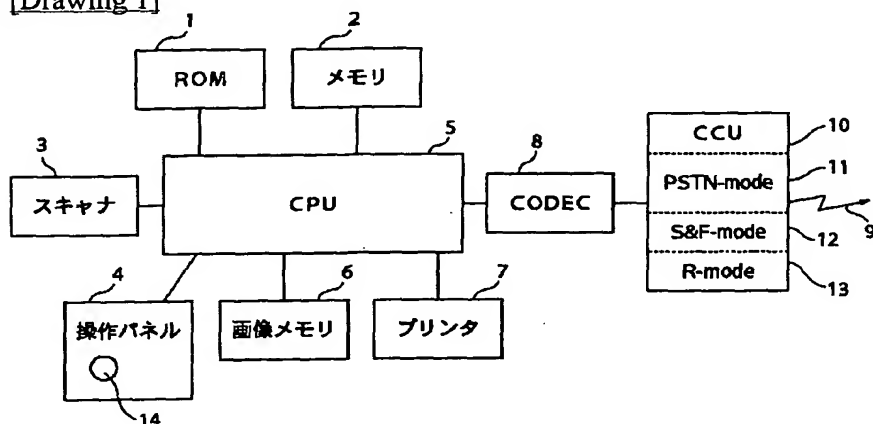
* NOTICES *

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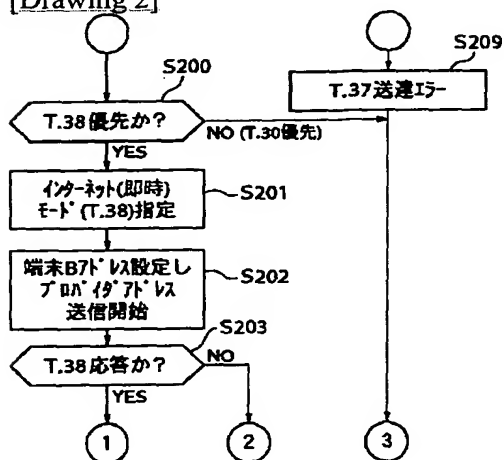
1. This document has been translated by computer. So the translation may not reflect the original precisely.
2. **** shows the word which can not be translated.
3. In the drawings, any words are not translated.

DRAWINGS

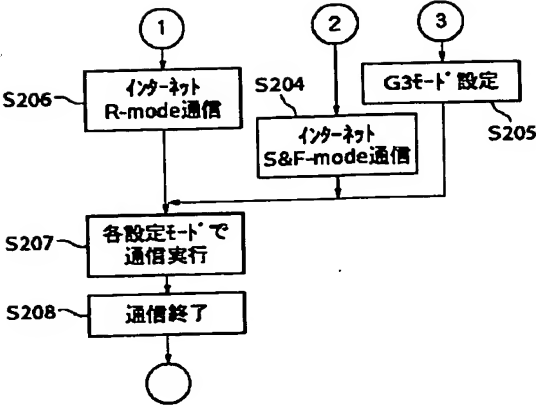
[Drawing 1]



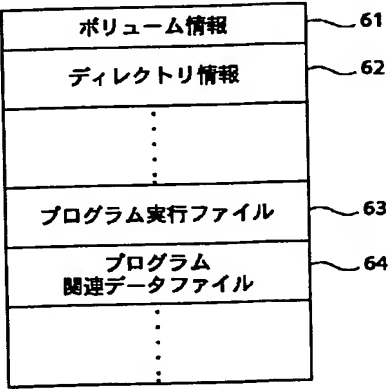
[Drawing 2]



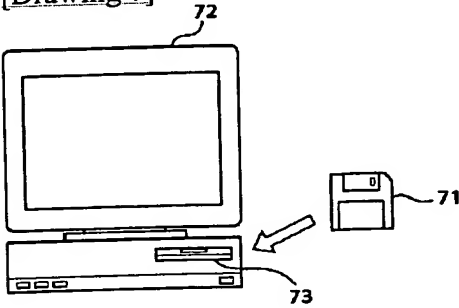
[Drawing 3]



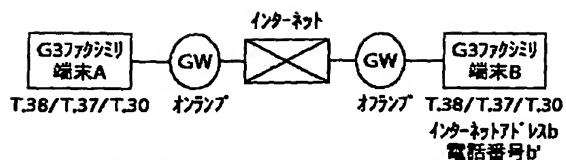
[Drawing 6]
[図 6]



[Drawing 7]



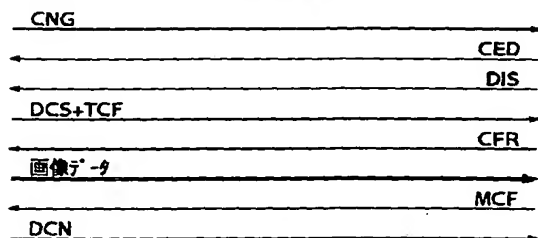
[Drawing 4]



1) T.38でGW7bに接続



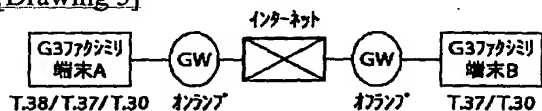
(T.38接続確立)



(T.38接続)



[Drawing 5]

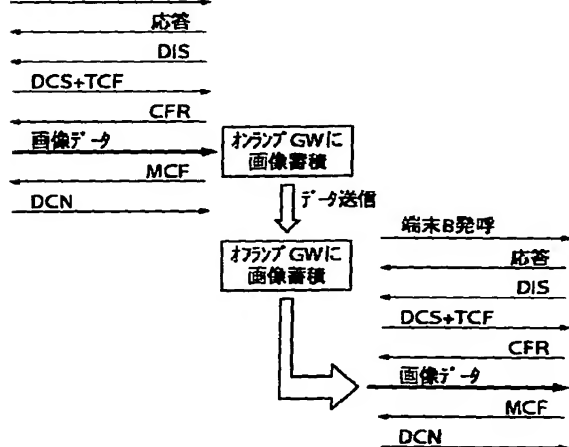


1) T.38でGW7bに接続



2) T.37で再発呼

GW7bに接続 (インターネット7b 電話番号b) 送出



[Translation done.]